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ALBERTA SWINE RECORD SYSTEM MANUAL

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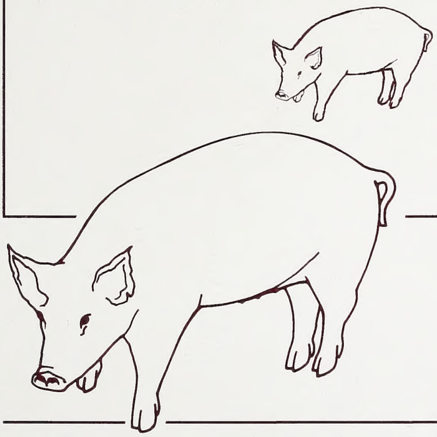

SWINE
REPRODUCTION
DIARY

Alberta
AGRICULTURE

Pork Industry

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LETHBRIDGE, Alberta

Additional brochures and supplies of record forms can be obtained from:

District Agriculturist Offices
Regional Swine Specialists
Pork Industry Branch, Animal Industry Division,
7000 - 113 Street, EDMONTON, Alberta

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ALBERTA SWINE RECORD SYSTEM MANUAL

INTRODUCTION

This is the second edition of *The Alberta Swine Record System Manual* put out by Alberta Agriculture and is a continuation of a project which was started two years ago when the first edition was placed before the public at the Pork Congress. We have been pleased with the response of our first edition and we are pleased to offer this second edition in which we have tried to implement a few new ideas and many suggestions for improvement that we have received from the producers.

The object of this brochure is to present some of the reasons why record keeping is so essential and to outline in detail the various records which are necessary to the modern swine unit. The records will be discussed on an individual basis one by one, and the reason for the record and the way in which that record is kept will be outlined.

When the swine unit consisted of half a dozen sows, and the only building they knew was a straw stack surrounded by some wire fencing, the necessity for keeping records was not very great. Under those circumstances, the farmer knew each sow individually by name, and he wasn't too greatly concerned with the type or the number of pigs that she produced. The only concern that he really had was that the sow produced at least one litter per year and raised a reasonable number of baby pigs in that litter.

Times have changed. The number of sows in the unit can vary between five and 5,000. Viability today requires an intensive but efficient production unit. Every detail of performance, every detail of cost, every detail of habit, and every habit of every individual animal must be known to the manager for maximum production. Thus, record keeping on a grand scale, covering every aspect of the unit operation becomes an essential part of the manager's daily routine.

It is hoped that this package of records will be acceptable to all producers. It is designed so that each producer will be able to extract from it those essential records that he feels are necessary for the operation of the unit. Each producer places a different set of standards or values on production efficiency. The kind and detail of the records kept will be governed by those standards. Some producers will wish to keep highly detailed records on all aspects of their operation, including individual sow records and individual boar records, while other producers may merely wish to keep records of the number of litters per sow per year, the number of pigs born and reared per sow per year, and the number of pigs that they sell.

It is the author's hope that this publication and record keeping package will encourage more producers to keep detailed records of their operation, and that these in turn will stimulate more interest in the finer points of effective record keeping and good swine husbandry. The maximum benefits of keeping records will be obtained if *all* segments of this package are utilized.

Through the use of detailed records, using segments of this package, your swine husbandry and efficiency of production will improve.

IDENTIFICATION SYSTEMS

Before you can keep useful records, you must be able to identify the individual animals within the herd that the records refer to. An effective identification system must be:

- hygienic
- simple to apply
- easy to read by anyone, not just the person who marked the pig
- visible for the life of the pig
- reasonably priced.

Three systems are in common use in Alberta:

1. *Ear Notching* — Ear notching is a traditional method. It is easy to perform and economical. A notch is made by cutting out a V-shaped portion of the ear with a special pair of notching pliers. Usually done when the pig is 10 to 12 days old, the notch grows with the ear and provides an easily read number throughout the pig's life. Once widely used, notching has declined in popularity. Ears may get torn, or even chewed, and ID numbers then become difficult to read.

Notches can serve any one of several functions.

Age identification can be achieved through notching. Birthdates can be notched into ears by designating one ear for the date of the month, the other for the month of the year. Thus a 2-6 notch would identify a pig born on the second of June.

Alternatively, you can use the number of days in the year — a notch of 3 would be January 3, a pig with an ear notch of 135 would have been born on May 15 and 360 would indicate a birthdate of December 26.

Birthdate identification is, *however*, only useful in a commercial operation where all pigs are sent directly to slaughter. Since no records are kept on sire and dam identification, and no individual pig numbers are recorded, birthdate identification has limited application in a breeding program where more complete information is required for making choices for breeding replacement.

Single notching identification of litters is another method of ear notching. Notching a litter number on a pig will give more information than simple birthdate notching. In this system, one ear can be used for the litter number, the other for an individual number within the litter. For example, 15-2 would be the second pig in litter number 15.

Individual consecutive *notching* involves assigning each pig an individual number so that its progress through the barn can be monitored by referring to records. This is obviously the most complete method of identification since each pig is recognized by individual number and can be found and distinguished from littermates and contemporaries at any time. Management decisions to select or reject the individual can therefore be made with confidence.

Individual notching can follow either of two systems.

The University of Alberta's Animal Science Department designed the 1-3-5 designated notching system shown in Figure 1.

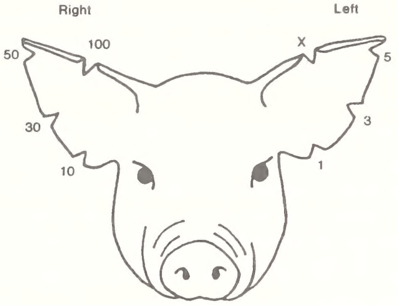


Figure 1. 1-3-5 Designated Notching

Consecutive numbers from 1 to 99 can be notched into the lower edges of the ears. To notch 44, you would notch the 10 and 30 on the right ear and the 1 and 3 on the left. To show the number 2, you would notch (side by side) the 1 notch. For 20, the 10 would be double notched. Numbers in the hundreds are notched in the top edges of the ears. The x space on the top of the left ear can be used when a mistake is made.

This system has limitations where large numbers of pigs are to be identified, but is useful in a small to medium-sized operation.

Another notching system is recognized by some breed associations and is illustrated in Figure 2.

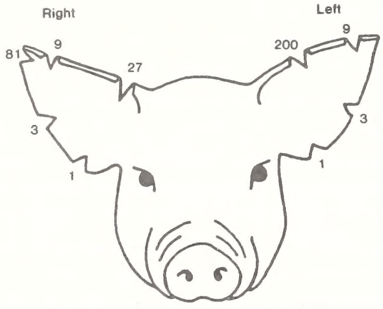


Figure 2. Notching as individuals

The litter mark is made on the right ear (pig's right) and all pigs in a single litter will have the same ear notches in this ear.

The individual pig number is marked on the left ear. Up to 161 litters can be identified with this system which makes it the most useful notching system for units handling large numbers of pigs.

When notching small pigs, space notches properly so that as the ear grows the numerical designation is clear.

2. *Tagging* — Many types of tags are available — metal, rubber, plastic, large, small, numbered, plain, color-coded — with varying methods of application. A round plastic tag composed of interlocking halves with a centre shank is the most practical. It is flexible and can be placed in the centre of the ear where it will not freeze the pig's ear in cold weather. The tag can be color-coded and can be purchased with numerals, or with blank space for you to write the numbers in.

Metal tags are not desirable as they are too easily torn out of the ear or can cause infections that corrode the identifying number. Large rubber or plastic tags can be viewed at a distance but snag too easily on building materials and can be removed when other pigs chew on them.

Whichever tag type you choose, remember the three essential qualities of a serviceable tag:

- it should be readable
- it should be as permanent as possible
- it should not react with the ear itself.

3. *Tattooing* — An ear tattoo is the most permanent type of pig identification. The major disadvantage is that a tattoo can only be read from close quarters. A tattoo is neater and more precise than notching and more permanent than tagging. It is often used in conjunction with a tag, as a backup if the tag is lost.

Indelible ink is rubbed into small holes pricked into the ear by tattoo characters. Each pig is identified by its herd of origin and its own individual litter number. Piglets should be tattooed before they are weaned. The tattoo pliers should be kept clean (not inked) and care should be taken to ensure that the tattoo needles penetrate the pig's ear. Ink (green roll-on is the best) is then brushed into the ear with an old toothbrush.

BARN BREEDING RECORD

The barn breeding record is designed to enable the operator to know when his sows were bred, to know which boars they were bred with, and to forecast when those sows are due to farrow. This can be a very simple record merely detailing the number of the sow, the boar number, the date at which she first shows heat, the date at which she is first bred, and the dates of any repeat breedings which occur. One very important factor which is always to be looked at when considering breeding records and particularly when considering problems in breeding is the interval between weaning and the first service, and a column to indicate the date of weaning has been added to this record.

When a sow is re-bred, the original entry is erased or crossed out, and the service is re-entered as an entry on a new date. In this way, the sequence of the farrowing dates is maintained as an ongoing series of dates in the column date due to farrow. This eliminates the problems of having to search back through the records to catch up with these repeaters.

The final column enables extra notes to be kept on a sow or her performance, as required.

Barn Breeding Record

Page ________

SOW #	BOAR #'s			DATE WEANED	DATE 1st SERVICE	2nd SERVICE	3rd SERVICE	DATE DUE TO FARROW	30-DAY PREGNANCY CHECK	NOTES

THE SOW AND LITTER RECORD

The sow and litter record is a simple card which should be available at all times above the sow, or in close proximity to the sow in the farrowing room. It records all details of a particular farrowing and the resulting litter. Usually this record consists of a single card, and is used only once for one particular litter. The sow and litter record should show the sow's number, the number of the boar by which she was bred, the date that she is due to farrow, and the number of pigs born alive and born dead.

More detailed information could be the number of gilts and number of male pigs born in the litter, and their birth weight. Dates should be entered on the card for such standard treatments as iron injection, taking out the eye teeth, taking off the tail, and any other treatments that the sow or litter receives. A weaning date and the weight of the pigs at weaning should also be entered.

The section headed health management record should record all aspects of the health of the sow and litter; treatments — what drugs were used, dosages, and why. This includes treatments to the sow as well as to the little pigs. Other comments on such things as the temperament of the sow, her milking ability, and her udder conformation could also be included.

The objective of this record is to carry a complete history of that litter, from that particular sow, from the time that they are conceived to the time that they are weaned.

SL 2

Alberta CARD No. ....

AGRICULTURE

SOW - LITTER CARD

SWINE R.O.P. PROGRAM

Breeder's Name ....

Sire Id. .... Breed ....

Dam Id. .... Breed ....

Day/Mo./Year Litter Born	No. Alive/Dead 1st Inspection	Wt. of Live Pigs Born
No. Alive at 3 Days	Pigs Added	Pigs Taken Away
Dated Inspected	No. Observed	Inspector
28 Day Litter Wt.	No. at 28 Days	D/M/Y Weaned

Day/Mo./Year Sire Sow Rebred (1st)	Day/Mo./Year Sire Sow Rebred (2nd)

Pig No.	Sex	Teats	Other	Health Management Record

Note: Piglets must be identified before weaning.

WEEKLY BARN RECORD

One of the most useful management tools that you can have is a record that shows you, at a glance, exactly how many pigs you have in the barn at any one time, exactly what has gone on in the barn over the last immediate period of time, and how the production in the barn is keeping up to target figures.

Is it possible without an expensive computer?

Yes, it is possible, and it doesn't take very long to do it.

A few minutes each night filling in the weekly barn record sheet prior to leaving the barn is time well spent.

This record shows numbers of sows bred, farrowed and weaned; number of little pigs born alive, born dead, weaned, and transferred or sold; inventory number for all the stock in the barn; and a deaths column keeps a close tag on losses in all areas.

So let's look at this all-encompassing weekly barn record, and see if it's really as frightening and complicated as it sounds. The first four columns relate to the activities of the sows and they show the breeding of the sows for the first time, any repeat breedings, numbers of sows farrowed and number of sows weaned.

The next three columns relate to the state of the baby pigs and show numbers born alive, numbers born dead, and the numbers weaned.

The next two columns show the number of deaths of farrowing pigs (F), nursery pigs (N), sows (S) and boars (B).

The next four columns show a heading of daily inventory and this should be one of the most important pieces of management recording that you keep. At a VIDO conference in Saskatoon in 1979, Mr. Albert Vielfaure stated, "I have always said that the farmer I talk to that doesn't keep any records loses very few pigs. Those that keep records lose quite a bit more, and those that keep records plus an inventory at the end of the month lose a lot."

That may sound a little cynical about the ability of people to keep accurate records, but in fact it is very easy in the rush to get cleaned up at the end of the day to forget one or two things which may have happened during the day, and particularly, to forget the odd pig that was pulled out of the farrowing crate dead and put into the garbage can and not recorded at that particular time.

It is essential therefore, that at the end of every month a physical count of pigs is made so that the recorded inventories appearing on the weekly barn record sheet can be compared to the actual physical inventory in the barn.

The inventory should be kept up on a daily running total basis. This is done by starting off the record whenever the recording system is put into effect, by taking a physical

Week No. ________

Weekly Barn Record

Date: ____________

	SOWS				PIGS			DEATHS		# SOLD or TRANS FERRED	DAILY INVENTORY				COMMENTS
	FIRST BREEDING	REPEAT BREEDING	FARROWED	WEANED	LIVE BORN	STILL BORN	WEANED	FARROWING (F) NURSERY (N)	SOWS (S) BOARS (B)		BOARS	SOWS	PIGS IN FARROWING (F)	PIGS IN NURSERY (N)	
Totals forward from last week								F N	S B						
MONDAY								F N	S B						
TUESDAY								F N	S B						
WEDNESDAY								F N	S B						
THURSDAY								F N	S B						
FRIDAY								F N	S B						
SATURDAY								F N	S B						
SUNDAY								F N	S B						
WEEKLY TOTAL								F N	S B						
TOTAL TO DATE								F N	S B						
TARGET FIGURES								F N	S B						

count and entering the numbers in the various columns of boars, sows, pigs in the farrowing area (F), and pigs in the nursery area (N). These totals are then altered daily according to what has happened in the rest of the barn and from the figures entered in the other parts of the sheet.

The beauty of this record is that it can all be put together into a loose-leaf folder week after week, and after the end of a six-month period (or at the end of a twelve-month period, or whatever), it is simple to run through it and add up the totals of the number of breedings, the number of repeat breedings we have had in our sows, the number of sows farrowed, number of sows weaned, number of pigs born alive, born dead, etc.

With this sort of information at your fingertips, it is easy at any time to calculate the average number of pigs born alive per litter, the average number of pigs born dead per litter, and the average number of pigs weaned per litter. By constantly comparing these figures with your target figures, (and everybody should have a target to aim at) it is easy to see whether the unit is on course, lagging behind, or in fact, doing better than anticipated.

The question of when a gilt is a sow is often asked. The true answer to this is that a gilt is a sow when she is one day older than the day she could have been shipped to market. It is essential therefore, that we keep track of all our unbred gilts and that they are included as part of our sow herd at the correct time. With the concept of the gilt pool, we have decided to incorporate a new record into the package to keep track of gilts being brought in and out of the gilt pool. Sow numbers in the weekly barn record sheet should include this gilt pool record.

TARGETS: Criteria for target figures would be:

1. 2.2 litters per sow per year
2. 10.5 pigs born alive per litter
3. 90% of all pigs born alive, weaned
4. Conception rate at first service above 90%.

The weekly barn record is really a numbers game, but very important in analyzing production parameters. It is suggested that merely physical numbers be entered on this sheet, and that I.D. numbers are put under the breeding record sheet when sows are weaned or bred.

Week No. 1

Weekly Barn Record

Date: Nov. 5, 1984

	SOWS				PIGS			DEATHS		# SOLD or TRANSFERRED	DAILY INVENTORY				COMMENTS
	FIRST BREEDING	REPEAT BREEDING	FARROWED	WEANED	LIVE BORN	STILL BORN	WEANED	FARROWING (F) NURSERY (N)	SOWS (S) BOARS (B)		BOARS	SOWS	PIGS IN FARROWING (F)	PIGS IN NURSERY (N)	
Totals forward from last week	/	/	/	/	/	/	/	/ F N	/ S B	/	4	86	156	242	/
MONDAY 5th	1	1	2	–	21	2	—	1 F N	S B		4	86	176	242	
TUESDAY 6th	3	—	1	5	12	1	46	2 F 3 N	1 S B		4	85	140	285	Sow died in gestation
WEDNESDAY 7 th	1	1	1	/	10	/	/	1 F N	S B	TSF. 45 to feeder bn.	4	85	149	240	
THURSDAY 8 th	/	/	/	/	/	/	/	F 1 N	S B		4	100	149	239	Brought in 15 bred gilts
FRIDAY 9th	/	/	/	/	/	/	/	1 F N	S B	Sold 4 Cull Sows	4	96	148	239	
SATURDAY 10th	/	/	/	/	/	/	/	F N	S B		4	96	148	239	
SUNDAY 11th	/	/	/	/	/	/	/	1 F 1 N	S B		4	96	147	238	
WEEKLY TOTAL	5	2	4	5	43	3	46	6 F 5 N	1 S B	Sold 4 Sows	/	/	/	/	
TOTAL TO DATE	5	2	4	5	43	3	46	6 F 5 N	1 S B	Tsf. 45 W.	/	/	/	/	Brought in 15 bred gilts
TARGET FIGURES	18	2	16	16	160	8	136	44 F 2 N	S B	134 W.					

EXAMPLE

On the first line across the page which is "totals brought forward from last week," we see that the daily inventory brought forward shows 4 boars, 86 sows, 156 pigs in farrowing, and 242 pigs in the nursery. Since it is the first day of a new month, there is no figure appearing in the rest of the line regarding the breeding totals and farrowing totals, etc.

Going back now to the first column, the day is Monday, November 2, and in our sow columns we see that one sow was bred for the first time, one sow was bred on a repeat, and two sows were farrowed. In the pigs columns, we see that the two farrowings produced 21 pigs born alive, and two pigs born dead. In the deaths column we have the loss of one piglet in the farrowing area (F). Thus on Monday evening, the daily inventory shows four boars, 36 sows, 176 pigs in farrowing (that's starting with 156, and having 21 born alive, and losing one), and 242 pigs in the nursery.

On Tuesday, November 3, looking at the sow columns, we see three sows bred for the first time, one sow farrowed, and five sows weaned. The one sow that farrowed produced 12 pigs born alive, one pig born dead, and we weaned 46 pigs in the five litters. Now death losses were fairly high that day, and show two piglets in farrowing were lost, three piglets in nursery were lost, and we even had one sow that died that day. All this is reflected in the daily inventory on the Tuesday, which shows four boars, only 85 sows (we've just lost one), and 140 pigs now in farrowing due to the fact that we've added 12 as born alive; we lost two, and transferred 46 from the farrowing area to our nursery area. The nursery figure of 285 reflects this transfer of pigs.

On Wednesday, November 4, we bred one sow for the first time, one sow was a repeat breeding, and we farrowed one; there were no sows weaned, 10 pigs were born alive, no pigs born dead, and we lost one pig in farrowing; and we transferred, as shown in the sold or transferred column, 45 pigs to the feeder barn. This is reflected now in Wednesday's daily inventory of four boars, 85 sows, 149 pigs in farrowing, and 240 pigs in nursery.

On Thursday, November 5, there was very little activity, other than that we lost one pig in nursery and brought in 15 bred gilts. These are reflected in the daily inventory on Thursday, which shows again four boars, 100 sows now (because of the increase in sow numbers by the influx of bred gilts), 149 pigs in farrowing, and 239 in nursery.

It can be seen that the inventory fluctuates according to the production and the losses or transfers of pigs from the barn. At the end of the week under the weekly total line, we can then show the total of all the sows which were bred during that week for the first time, sows that were repeat bred, sows that farrowed, and sows that were weaned. Beneath this is a line which says total to date, and this can be a running total on a monthly basis (or on a six month basis, or even a yearly basis).

It is usually more convenient for the sake of comparing actual figures with target figures to work on a goal to the end of the month, and then start again. The bottom line of the sheet shows the target figures which you have set for your unit for the particular production factor for that month.

The months can be defined in terms of calendar months or in terms of four and five week periods. The author favors the first system, since we often compare data from month to month, and year to year, or on a same period basis, and if you use the 4,4,5, week system, this gets complicated. Records should be kept simple!

Refinements, of course, can be applied to all these record sheets. One refinement which may be desirable, particularly with a purebred pedigree breeder or someone selling crossbred breeding stock, would be an inclusion showing the ROP ratings of the various gilts or boars that are being reared and sold.

GILT POOL RECORD

One of the major areas of lost production is that lost time between the culling of a sow and her replacement by a bred gilt. The relatively new concept of the gilt pool is an important new tool to help overcome this lost production time. To help keep track of this gilt pool we are incorporating this new section in the Alberta Swine Record System.

It is important that gilts coming from the feeder barn into the gilt pool should be recorded both in and out, and that days in heat for the first or even the second time should be recorded. Also record the date of breeding and the boar being used for that breeding. It is suggested that gilts be brought up from the feeder barn on a regular, preferably weekly basis, and that these gilts be mixed and given boar contact to induce a heat cycle. These heat cycles should be recorded in the appropriate column, and the second heat cycle should also be recorded unless the decision is made at this time to return the gilt either to the feeder barn or to ship her, or to breed her. A fact sheet on the organization and operation of a gilt pool is available from the pork industry branch or from the regional swine specialists.

Gilt Pool Record

DATE	TATTOO # GILTS IN	DATE 1ST BOAR CONTACT	DATES 1ST HEAT	DATES 2ND HEAT	DATE(S) BRED	BOARS USED		DISPOSAL OF GILTS				NOTES
								DATE	BR.'D BARN	FIN'R BARN	SOLD	

SOW MANAGEMENT CARD

The sow management card will assist the producer in the identification of the most reproductively efficient animals in the herd, providing the information necessary to select or cull breeding sows.

The front of the card gives the sow's personal history, including details as to birth date, date of the first heat, date of the first breeding. Three sections dealing with the sow and her reproductive life include a breeding summary, a production summary, and a sow health record.

Rapid gain in reproductive efficiency can be attained by choosing animals that reach puberty at an early age. It is important therefore that the first heat date and first breeding date are noted.

A sow's condition at breeding is believed to play an important role in her fertility, and while condition scoring is still very subjective, even when weight and backfat are considered, it is considered adequate at this juncture to use subjective evaluation of her condition such as good, fair, poor, or fat until more accurate assessment criteria have been established.

Record the date the sow farrows and calculate the interval (in days) from one farrowing to the next. Sows requiring more than two estrus cycles (heat periods) to conceive should be culled. Abortions do not count as farrowings. The farrowing interval is lengthened when an abortion occurs. Identifying boars, and dates they are used, will point out problem boars as well as keep track of the sow's fertility.

Note the number of piglets born live, dead (including mummies), and the number of mummies at each farrowing, as well as the total live litter weight and average live litter weight. Be sure to include in the spaces provided the weaning date, number of piglets weaned, the average weaning weight and piglet condition at weaning.

Emphasis can then be placed on selecting the most reproductively efficient sows that produce large litters with heavy weaning weights.

Record all information requested in the health history section, making comments on the success of any treatments you might use.

The production summary section of the sow management card is a recording of all litters that the sow has had and should incorporate all figures taken or transferred from the sow litter card. The sow health record should detail what problems the sow has had through her lifetime and what treatments have been given.

Sow Management Card

SOW I.D. ____________ BREED ____________ SIRE ____________ DAM ____________

BIRTH DATE ____________ FIRST HEAT ____________ FIRST BREEDING ____________

BREEDING SUMMARY

DATE WEANED	DATE BRED	BOARS USED	DATE BRED	BOARS USED	DATE BRED	BOARS USED	SOW CONDITION AT BREEDING	FARROWING		NOTES
								DATE	DAYS FROM LAST FARR	

PRODUCTION SUMMARY

PARITY #	LITTER CARD #	PIGLETS BORN			LITTER WT AT BIRTH		AGE @ WEANING DAYS	# WEANED	PIGLETS @ WEANING		NOTES
		ALIVE	DEAD	MUMMIFIED	T'L	AV			AV WT	COND.	

DISPOSAL

REASONS

SOW HEALTH RECORD

DATE	DIAGNOSIS	TREATMENT

The overall use of the sow management card is greatly enhanced if all information is kept in detail. It should be regarded as the life history of the sow, and is most useful when deciding whether to cull the sow for any reason, whether to keep her for the selection of replacement breeding stock or in the analysis of any breeding problems which may occur within the herd.

The back of the card is a three year calendar with 21 days across each row. Alternate months are shaded, with the first day of each month containing both the month (Jan. = 1, Feb. = 2, and so on) and the day of the month. Using the code provided, record all events on the day on which they occur. Color coding of entries would be useful here.

It is particularly important that all sows be checked for heat every day until *confirmed* pregnant. Many opportunities to breed for a second time will be missed if a sow is only checked for heat 21 days after breeding. Additionally, anestrus sows or those with cystic ovaries can very rapidly be identified, if each day a sow is in heat is recorded.

This page will allow the producer to quickly review a sow's past reproductive performance as well as her most current history so that potential problems can be identified and treated.

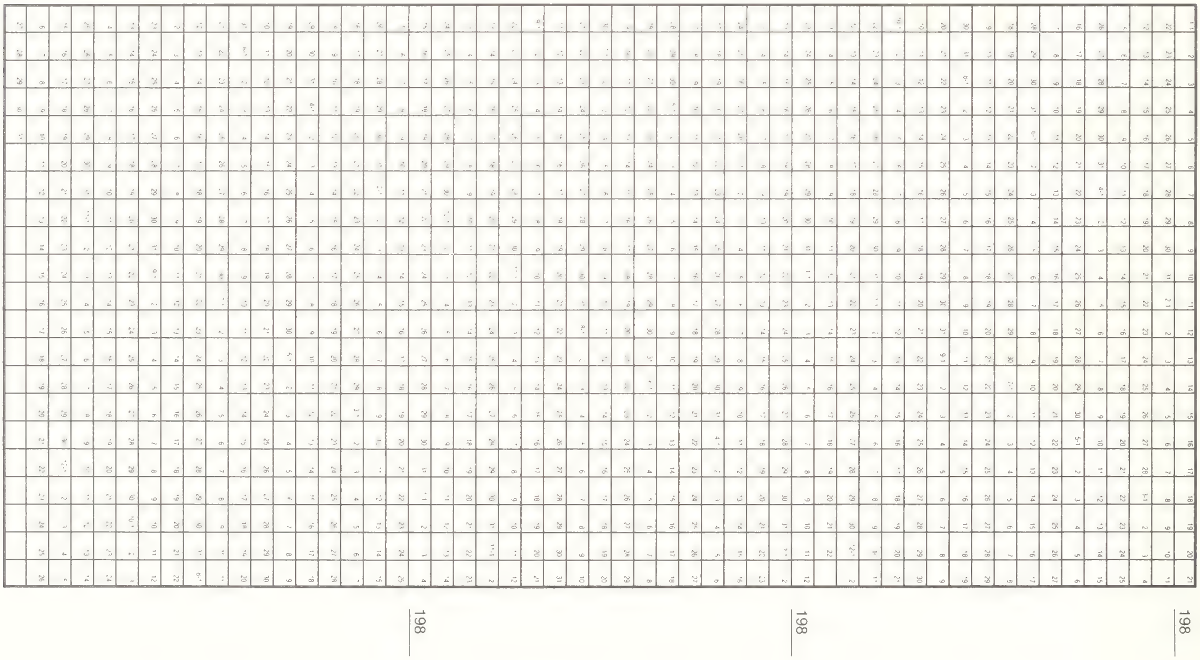
The sow management record will not necessarily be for every producer, but is a most important tool in the assessment of any breeding problems.

Sow Reproductive Record

SOW I.D. ____________________

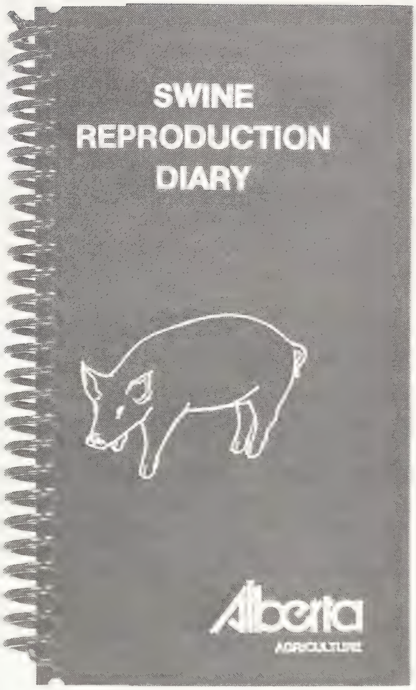
COLOR CODE ☐ B = BRED ☐ H = HEAT ☐ A = ABORTED

☐ F = FARROWED ☐ W = WEANED ☐ P = DIAGNOSED PREGNANT ☐ O = DIAGNOSED OPEN



SWINE REPRODUCTION DIARY

The diary is an integral part of the record keeping package, and is designed to record daily happenings in the barns: sows bred, boars used, weanings, transfers, death losses, sales, etc. The monthly summaries in the diary are useful for daily reference, but it must be emphasized that diary entries must be transferred to the permanent record in the folder on a regular basis, preferably daily.



BOAR SERVICE RECORD

This addition to the swine record keeping package will prove useful to those producers who keep good records, and who wish to monitor and analyze the performance of their boar studs. The advent of computer records has brought out the great variability in the performance of different boars in a herd system, and these boar service records will enable a producer to cull boars on the basis of actual performance in the herd.

It is suggested that record summaries of each boar should be done at least every six months.

Boar Service Record

BOAR R.O.P.	
B.F. PROBE	
DAYS TO 90 KG	
F.C.	
STN TEST	
HOMETEST	

SIRE: ______ SIRE'S R.O.P. ______

DAM: ______ DAM'S R.O.P. ______

PURCHASED FROM: ______

HOME BRED: ______ ☐ (CHECK) ______

BOAR NO.

DATE OF BIRTH:
AGE BROUGHT IN:
AGE AT 1ST SERVICE:

RECORDS OF BREEDING & PRODUCTION

DATE	SOW/GILT NUMBER	FARROWED ALIVE	DEAD	OTHER BOARS/USED	

DATE	SOW/GILT NUMBER	FARROWED ALIVE	DEAD	OTHER BOARS USED	

SUMMARY

AS AT / / (DATE)

NO. SERVICES	
NO. FARROWING	
CONCEPTION RATE %	
T'TL BORN ALIVE	
T'TL BORN DEAD	
AV. BORN ALIVE/LITTER	
AV. BORN DEAD/LITTER	

COMMENTS

FEEDER BARN RECORD

In many ways this is very similar to the weekly barn record although we have decided to make this a monthly record rather than a weekly record, since it is rare for a producer to have more than one or two entries per week of activities within the feeder barn. It is a very simple record and is self-explanatory. Every effort should be made to weigh or guess the weight of pigs brought in, pigs that die, and of pigs that are sold out of the barn so that some calculation can be made as to growth rates and feed conversions from time to time.

MONTH ______________

Feeder Barn Record

YEAR ______________

	Inventory	# Pigs Brought In	Weight of Pigs In	Deaths—Approx. Weights	# Pigs Out	Total Weight Out	Market Price CWT	Average Index	Net Cash		NOTES
Totals Brought Forward Dates											
Monthly Total											
TOTAL TO DATE											

FINANCIAL RECORD
(Swine Unit Expenses)

Like the production record, the financial record of a unit is of increasing importance.

The two should go hand in hand, and so an attempt is made in this package to include a record of inputs and costs to the swine unit.

It is realized that this may not meet the overall financial picture, since many farm costs are joint enterprise costs and do not apply solely to the swine operation. It is suggested that allocation of these costs should be made to the swine unit records periodically.

The important point of these records is that they give an indication of basic inputs and cost factors in the various stages of production.

Feed is still over 50 per cent of the total cost of raising a hog. Other than actual production figures (i.e. pigs per sow per year), feed input and costs have the greatest potential for savings (or loss) in the unit.

Simple entry of quantities and total prices from invoices will suffice to provide an ongoing picture of total feed usage in all areas of the swine unit.

Monthly calculations of the quantities of feed used in each sector, bearing in mind beginning and ending inventories of feed and pigs each month, can then be done on a per pig basis.

This will provide a useful pointer on over or under feeding, or feed wastage, and will provide an estimate of feed costs per pig sold, either as a weaner or a finished hog.

FEED GUIDELINES

Rule of thumb guidelines for feed usage are:

Total sow feed per year	1 tonne/sow
Total boar feed per year	1 tonne/boar
Prestarter	5 to 10 lb/pig
Starter (to 60 lb liveweight)	40 to 60 lb/pig
Grower/finisher ration to 230 lb liveweight	550 to 600 lb/pig

Swine Unit EXPENSES

DATE	SUPPLIER	CK. #	SOW FEEDS QTY.	TOTAL PRICE	STARTER FEEDS QTY.	TOTAL PRICE	GROWER FEEDS QTY.	TOTAL PRICE	GRAIN QTY.	TOTAL PRICE	SUPPLEMENT QTY.	TOTAL PRICE	BARN SUPPLIES	% UTILITIES	% OFFICE & PHONE	% TAXES & INSURANCE	INTEREST & % BANK CHARGES	VET FEES & SUPPLIES	REPLACEMENT & REPAIRS	MISC.

RECORD ANALYSIS

All the records in the world are of no use if they are not interpreted and analyzed to provide information that can be acted upon by the manager or operator.

End of month figures should be transferred from the barn record sheet to the monthly summary to provide an ongoing picture of production levels, and to compare them with your target figures. In this way you can see trends developing and can take any necessary action.

Useful figures to keep are:

1. Average number of sows — from daily inventories
2. Litters per sow per year = $\frac{\text{total litters born}}{\text{average number of sows}}$
3. Average litter size born alive
4. Average litter size weaned
5. Percentage born dead
6. Pigs weaned per sow per year (from 2 and 4, above)
7. Conception rate — percentage of sows farrowed against sows bred

Points that should be noted are:

- A gilt becomes a sow as soon as she is one day older than the age she would have been shipped to market.
- A sow that loses her litter is often returned to the dry sow area before her real weaning date. Don't forget to record her as weaned. Periodically, check number of sows weaned against number of sows farrowed.
- Regarding conception rates — the number of sows farrowed will be less than the actual number conceived, because of culls, reabsorbed litters, etc.
- A rough guide to conception rates can be calculated from the weekly barn records (as long as the herd is in a regular pattern of farrowing; i.e., so many per month), by comparing the number of first and repeat breedings.

A monthly production summary enables the producer to see at a glance the production efficiency of the unit, and to compare month to month trends in the production factors. One useful adaptation of this would be to write the previous year's monthly figures in, say, red at the one side of a box, and enter current figures in, say, blue to give the producer an instant comparison of production with the same month last year.

Monthly Production Summary

YEAR: ____________

MONTH	AVERAGE SOWS ON INVENTORY	# SOWS BRED	# SOWS REPEAT BRED	# SOWS FARROWED	# SOWS WEANED	TOTAL PIGS LIVEBORN	TOTAL PIGS STILLBORN	TOTAL PIGS WEANED	AVERAGE LITTER BORN	AVERAGE LITTER WEANED	# SOLD OR TRANSFERRED
JANUARY											
FEBRUARY											
MARCH											
APRIL											
MAY											
JUNE											
JULY											
AUGUST											
SEPTEMBER											
OCTOBER											
NOVEMBER											
DECEMBER											
TOTALS FOR YEAR											

At the end of the year, the totals for the year would then be transferred to the yearly summary sheet for an ongoing year by year comparison of the unit's production and efficiency.

Yearly Summaries

YEAR	19____	19____	19____	19____	19____	19____
Average Sows Inventory						
Number of Sows Bred						
Number of Sows Repeat Bred						
Number of Sows Farrowed						
Number of Sows Weaned						
Total Pigs Live Born						
Total Pigs Stillborn						
Total Pigs Weaned						
Average Litter Born						
Average Litter Weaned						
Number Sold or Transferred						

COMPUTERS

The systems which have been discussed are relatively simple and easily kept, but with the advance of computer technology, and the desire for better knowledge of the workings of the unit by most modern-minded operators, a look at the potential for computers at the present time and in the future would not be amiss.

Computer technology at present has been developed for the computer analysis and keeping of farm records, and various companies have produced software packages for the swine operator. Some of these packages are not now available in Canada, and a lot of the work that has been put into swine development for the computer has been in the United Kingdom and the United States.

One of the advantages of the computerised system is that instant recall can be had for production figures, for financial figures, and for breeding records. Individual sow or individual boar records can be used as a selection tool for future breeding stock.

Undoubtedly, as the computer age comes into being, more and more people will turn to this form of sophisticated record keeping for their swine operation. While many may feel that this degree of sophistication is too complicated and time consuming for their operation, it is evident that the successful operator has to know more and more about every aspect of the operation. It is also true that the more you know of your operation, the more you want to know, and computerisation can simplify the keeping, and more importantly, the recall, of the most detailed and sophisticated records.

Computer hardware has become very much cheaper over the last few years, and a system to support the most complicated records of even a 200-sow unit should be well within the accounting and record-keeping budget of such a unit. Software packages are being developed and many of these have a degree of flexibility that enables the operator to choose the degree of sophistication that is wanted for the particular record keeping system.

If, in the future, a producer decides to computerise, the records in this package are readily adaptable to transfer to such a program.

Swine Gestation Table — 115 Days

Bred Jan.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Jan.
Farrow April	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	May
Bred Feb.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	—	—	—	Feb.
Farrow May	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	—	—	—	June
Bred Mar.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mar.
Farrow June	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	July
Bred April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—	Apr.
Farrow July	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	—	Aug.
Bred May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	May
Farrow Aug.	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Sept.
Bred June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—	June
Farrow Sept.	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	—	Oct.
Bred July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	July
Farrow Oct.	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Nov.
Bred Aug.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Aug.
Farrow Nov.	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Dec.
Bred Sept.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—	Sept.
Farrow Dec.	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	—	Jan.
Bred Oct.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Oct.
Farrow Jan.	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Feb.
Bred Nov.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—	Nov.
Farrow Feb.	24	25	26	27	28	1	2	3	4	5	6	7	8	9	10	11	12	12	14	15	16	17	18	19	20	21	22	23	24	25	—	Mar.
Bred Dec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Dec.
Farrow Mar.	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Apr.

N.L.C. - B.N.C.
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